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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/049,477	02/12/2002	Klaus-Peter Knorr	02077PCT/TL	4098

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EXAMINER

DONG, DALEI

ART UNIT	PAPER NUMBER
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2875

DATE MAILED: 03/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/049,477

Applicant(s)

KNORR ET AL.

Examiner

Dalei Dong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133)
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 12 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 12 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☐ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. 10/049,477.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Specification

1. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.
- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (h) DETAILED DESCRIPTION OF THE INVENTION.
- (i) CLAIM OR CLAIMS (commencing on a separate sheet).
- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

2. The disclosure is objected to because of the following informalities:

There are gaps appeared between some of the paragraphs. The gaps should be eliminated.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,404,069 to Olwert in view of U.S. Patent No. 5,719,468 to Takanishi

Regarding to claims 1-3, Olwert discloses in Figure 1, "a typical halogen incandescent or lamp of a type described above having an elliptical filament chamber whose dimensions are 10 mm OD and 22 mm long containing a coiled-coil tungsten filament 18 mm long, an unsupported 70 to 150 watt, 240 V filament coil will sag to the wall after about 24 hours of operation. This can result in melting of the wall and/or shorting and rupturing of the filament coil. This problem increases as the operating voltage of the lamp increases for a given size filament chamber and coil length, because as one increases the operating voltage of the lamp for a given operating wattage, the diameter of the filament wire is smaller than that for a lower voltage, while the overall length of the wire from which the filament coil is fabricated is greater. For example, for a typical lamp rated at 50 watts and 120 volts a 10 mm long coiled-coil tungsten filament will be made from tungsten wire having a diameter of about 1.9 mils and a total length of

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600 mm. For the same type of lamp rated at 100 watts and 120 volts, the filament wire diameter will be about 3 mils, but with a total wire length of about 800 mm. In marked contrast, a lamp rated at 100 watts and 245 volts will have a wire diameter of 1.9 mils and a total wire length of 1400 millimeters. Coiling this length of wire in the same manner as above gives a coil 18 mm long. Thus, going from 100 watts and 120 volts to 100 watts and 245 volts results in a total wire length increase of 75% and a decrease in the wire diameter by almost 40%. One can therefore appreciate why a higher voltage rated filament coil will tend to sag more than one rated for operation at a lower voltage. Hence a filament support is essential for the successful manufacture and operation of such high voltage lamps" (column 3, line 48-68 to column 4, line 1-12).

However, Olwert does not disclose the length of the single coil having a value in the range from 4.0 mm to 6.5 mm. Takanishi teaches in Figures 1 and 2, "A sealed portion (not shown) is also formed at an end of envelope 2 opposite thin tube 6, where envelope 2 is attached a base 7. In this embodiment, base 7 has a flange 8 and terminals 9 so that lamp 1 can be applied as a headlight for an automobile. A filament 10 is provided along the central axis of envelope 2 in a space surrounded by cylindrical portion 3, so as to span lead wires 11 passed through the sealed portion. Filament 10 has a length of 5.35 mm and an outer diameter of 1.3 mm. Filament 10 is formed of a single coiled wire made of tungsten having a diameter of 0.18 mm. It has a coiling pitch of 146% and includes 20 turns. Lead wires 11 are connected with terminals 9, respectively" (column 2, line 55-67).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have constructed the filament of Olwert with the length of filament specified by Takanishi in order to enable the uniformity of the filament temperature to improve without decreasing the lamp efficiency.

5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,404,069 to Olwert in view of U.S. Patent No. 5,719,468 to Takanishi in further view of U.S. Patent No. 5,883,468 to Hobbs.

Regarding to claim 4, Olwert discloses a halogen lamp has an electrical power consumption of between 50 watts and 100 watts and has at least one incandescent filament, characterized in that the at least one incandescent filament is formed as a single coil, the dimensions and/or geometry of which are matched to an operating voltage of at least 20 volts.

However, Olwert does not disclose the length of the single coil having a value in the range from 4.0 mm to 6.5 mm and the outside diameter of the single coil is between 1.4 mm and 2.0 mm. Takanishi teaches a single coil having a value in the range from 4.0 mm to 6.5 mm however, fails to teach the outside diameter of the single coil is between 1.4 mm to 2.0 mm.

Hobbs teaches in Figures 1 and 2, "In a working example some of the dimensions were approximately as follows: The light transmissive envelope was made of a standard 9007 vehicle capsule made of aluminosilicate hard glass. The leads were made of nickel plated steel rods. There were two filaments to allow for low and high beam operation.

The low beam had a 1895 coil (internal company designation) with a 184 percent pitch, and a heavier wire weight of 90.52 mg as compared to the normal wire weight of 85.3 mg as used in a standard 9007 vehicle headlamp. The coil had an outside diameter of 1.5088 millimeters (0.0594 inches), and had 17 turns for an overall coil length of 5.40 millimeters (0.212 inches). The lamp was filled with a halogen, a phosphine getter and a 50/50 xenon krypton gas fill to a pressure of 8 atmospheres" (column 3, line 57-67 to column 4, line 1-3).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have constructed the filament of Olwert with the specified dimensions of Takanishi in combination with Hobbs in order to enable the uniformity of the filament temperature to improve without decreasing the lamp efficiency and further increase the lamp life without compromise the lamp cost, light output or distribution.

6. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,404,069 to Olwert in view of U.S. Patent No. 5,719,468 to Takanishi in further view of U.S. Patent No. 5,808,399 to Yoneyama..

Regarding to claim 5, Olwert discloses a halogen lamp has an electrical power consumption of between 50 watts and 100 watts and has at least one incandescent filament, characterized in that the at least one incandescent filament is formed as a single coil, the dimensions and/or geometry of which are matched to an operating voltage of at least 20 volts.

However, Olwert does not disclose the length of the single coil having a value in the range from 4.0 mm to 6.5 mm and the single coil are provided with supporting means. Takanishi teaches a single coil having a value in the range from 4.0 mm to 6.5 mm however, fails to teach the single coil are provided with supporting means.

Yoneyama teaches in Figures 3 and 4A, "a sub-filament, and the front supporting end portion 17 is spot-welded via a foil body (to be described later) to the upper surface of the supporting piece 12 of the shade 11. Meanwhile, the rear supporting end portion 17' is spot-welded via a foil body 18 (to be described later) to the distal end portion 8a of the support wire 8 as the feeder line for the sub-filament" (column 3, line 65-67 to column 4, line 1-4).

Yoneyama also teaches in Figures 3 and 4A, "these filaments 14,15 are made of tungsten and each are composed of a coiled portion 16 and a pair of supporting end portions 17,17a protruding from each tail end of the coiled portion 16. A pair of foil bodies 18 made of molybdenum and the like are secured to the supporting end portions 17,17' at the positions closer to each end thereof, respectively" (column 4, line 5-10)

Yoneyama further teaches in Figures 3 and 4A, "specifically, the foil body 18 is wrapped around the supporting end portion 17 or 17', and the wrapped foil body is squeezed together at positions close to each end thereof to form a cylindrical portion 18a having a cylindrical form along the circumference of the supporting end portion 17 or 17' and a fin-like portion 18b protruding from the cylindrical portion 18a, as shown in FIG. 1. Thus, the foil body 18 is designed to have a substantially P-shaped cross section when

the foil 18 is cut along a plane orthogonal to the axis of the supporting end portion 17 or 17'" (column 4, line 11-20).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to manufacture the filament of Olwert with the specified limitations of Takanishi and secure the filament with the molybdenum foil body of Yoneyama in order to enable the uniformity of the filament temperature to improve without decreasing the lamp efficiency and eliminate the deformation of filament after welding.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following prior art are cited to further show the state of the art of composition of a halogen lamp.

U.S. Patent No. 4,959,585 to Hoegler.

U.S. Patent No. 4,965,485 to Tarumi.

U.S. Patent No. 5,313,135 to Fletcher.

U.S. Patent No. 5,793,159 to West.

U.S. Patent No. 5,850,124 to Hasegawa.

U.S. Patent No. 6,034,473 to McBride, Jr.

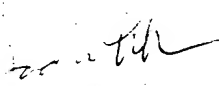
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dalei Dong whose telephone number is (703)308-2870. The examiner can normally be reached on 8 A.M. to 5 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on (703)305-4939. The fax phone numbers for the organization where this application or proceeding is assigned are (703)872-9318 for regular communications and (703)872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

D.D.
March 19, 2003



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